

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS S. MASON and TUYEN VAN PHAM

Appeal No. 1999-2850
Application No. 09/042,861

ON BRIEF

Before KRASS, JERRY SMITH and BARRY, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-14, all of the pending claims.

The invention is directed to a printer apparatus cartridge. More particularly, a frangible member is provided and the frangible member is coupled to a drive member

on the cartridge which moves the cartridge ribbon. The drive member moves responsive to the movement of the frangible member and the frangible member is made to break, or, in another embodiment, to deform, responsive to the drive member presenting a resistance to movement above a predetermined level. This provides for a printer which can withstand higher speeds and abrupt speed changes and which includes a longer, more densely packed, ribbon to provide extended ribbon life which is reliable, economical and readily replaced.

Representative independent claim 1 is reproduced as follows:

1. A printer apparatus comprising:

a print ribbon supported on a cartridge;

a drive member moveable on the cartridge, wherein movement of the drive member is operative to move the ribbon;

a frangible member, said frangible member in operative connection with the drive member, wherein the drive member is movable responsive to the movement of the frangible member, and wherein the frangible member is configured to break responsive to the drive member presenting a resistance to movement above a predetermined level.

The examiner relies on the following references:

Anderson	780,490	Jan. 24, 1905
Trigilio	2,892,329	Jun. 30, 1959
Norris	2,889,162	Jun. 02, 1959
Hanke	3,359,171	Dec. 19, 1967
Fabrizio et al. (Fabrizio)	3,753,625	Aug. 21, 1973

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Walker	5,071,376	Dec.10, 1991
Marrison et al. (Marrison)	5,145,213	Sep. 08, 1992
Fushimoto et al. (Fushimoto)	5,175,563	Dec. 29, 1992
Gee	5,186,079	Feb. 16, 1993
Zinsmeyer et al. (Zinsmeyer)	5,383,733	Jan. 24, 1995
Kanoll	5,443,372	Aug. 22, 1995

Claims 13 and 14 stand rejected under 35 U.S.C. § 112, first paragraph.

Claims 1-12 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner cites either one of Zinsmeyer or Fushimoto in view of Kanoll, Gee, Marrison, Walker, Fabrizio, Hanke, Trigilio, Norris and Anderson.

Reference is made to the briefs and answer for the respective positions of appellants and the examiner.

OPINION

Turning first to the rejection under 35 U.S.C. § 112, the examiner does not clearly indicate on which section (enablement, written description, or best mode) of the first paragraph of 35 U.S.C. § 112 he relies. However, since the examiner questions how deformable tabs deform without breaking in response to a resistance to prevent damage to the system and it is clear, from page 18 of the specification, that there is definite support for such deformable tabs, the examiner appears to be basing the rejection on the enablement clause of 35 U.S.C. § 112.

The examiner contends that it is not known what structure provides the capability of deformable tabs. The examiner understands how frangible tabs are used to break

above a predetermined level of force to allow the drive shaft to rotate freely, preventing damage to the drive motor, but does not understand how a deformable tab would allow the motor and drive shaft to rotate freely, preventing such damage. The examiner summarizes the rejection, at page 5 of the answer:

...it is not clear from the specification how the tab **deforms without breaking** to allow the drive motor and drive shaft to **rotate continuously** when the input force resisted by the transmission mechanism reaches the predetermined level. [emphasis original]

We will not sustain the rejection of claims 13 and 14 under 35 U.S.C. § 112, first paragraph, because, in our view, the examiner has not set forth a reasonable basis for attacking the sufficiency of the instant disclosure. After disclosing breakable tabs which break out of the way to allow free movement of the motor and drive shaft, page 18 of the specification indicates that there are alternative embodiments including “tabs which rather than being frangible, are merely deformable so as to limit the resistance....such that the tabs deform without breaking in response to a resistance, to enable the motor drive shaft to turn in the recess.”

Whether the tabs are broken or bent out of the way, i.e., deformed, it is clear that such action is taken in order to enable the motor drive shaft to turn freely. It is clear from the disclosure that in the “deformable” embodiment, the tabs are merely pushed

aside so that the motor drive shaft turns freely in the recess created by the deformation of the tabs. With such a disclosure, the skilled artisan would have been enabled, without undue experimentation, to make and use the invention claimed by using a tab material which would withstand resistance up to a degree and then bend away, or deform, rather than other materials which would break away under the predetermined resistance. While the specification does not recite a specific material that is to be used for such deformable tabs, the artisan would have found such materials, dependent on the predetermined resistance to be overcome, without undue experimentation.

We turn now to the rejection of claims 1-12 based on 35 U.S.C. § 103.

The examiner contends that either one of Zinsmeyer or Fushimoto discloses the instant claimed invention but for the tab 95 in Zinsmeyer or a drive member in Fushimoto being made to break in the instance of a jam, thereby preventing damage to the motor and associated drive components in the event of a malfunction.

However, the examiner points to any one of 9 secondary references for the teaching “of having a weaker element break or fracture at a time of overload, so as to prevent the more destructive effect of a more significant member failing” [answer-page 6].

While it may be known, in general, to have an element break at the time of an

overload, we find no reason, and the examiner has convinced us of none, for the artisan to have looked to other references for a teaching of breaking a frangible member for some application in Zinsmeyer or Fushimoto. That is, neither Zinsmeyer nor Fushimoto suggests that there is any problem to be solved that would suggest the solution of employing breakaway frangible members. In fact, there is nothing in Zinsmeyer or Fushimoto to suggest that they teach anything more than the conventional minimal frictional resistance to movement of a print ribbon on a printer cartridge. Therefore, the question remains that, other than appellants' own disclosure, where is the suggestion for using breakable frangible members in either Zinsmeyer or Fushimoto?

The examiner specifically points to element 95 in Zinsmeyer and suggests that "tab" 95 in Zinsmeyer may be made to be broken in the instance of a jam. However, we do not find this suggestion to be well-founded. Element 95 in Zinsmeyer is identified in that reference as a "rib" on a reel drive sprocket [column 11, line 63]. There appears to be no reason for one to break a rib on a reel drive sprocket.

While the instant independent claims appear rather broad, they all require, in one form or another, a breakable frangible member, or a force limiting mechanism, or a

transmission means connected to a media means for delivering a moving force to the media means responsive to movement of the transmission means and for "ceasing to

apply further moving force..." or "operatively disconnecting the drive member...responsive to the drive member encountering a resistance to movement above a predetermined level. We interpret these various limitations as referring to a breakable or deformable member, as disclosed, which will give way in the face of a predetermined force. We find no such suggestion in the applied primary references and we find no cogent rationale for combining either of these references with any one of the nine cited secondary references.

Moreover, while we do not reach the declaration of Mr. Mason because, in our view, the examiner has not even established a prima facie case of obviousness with regard to the instant claimed subject matter, we do note that while the declaration raises some salient points regarding skepticism by others in the field and going in a direction completely different from conventional methods, the examiner summarily dismisses the declaration with curt replies of "no corresponding limitations in the claims," "absence of any corroborating affidavits," "conventional engineering expedient" and "opinions...[without] factual basis" [final rejection, pages 11-12].

CONCLUSION

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The examiner's decision rejecting claims 13 and 14 under 35 U.S.C. § 112, first paragraph, and claims 1-12 under 35 U.S.C. § 103 is reversed.

REVERSED

ERROL A. KRASS)	
Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
JERRY SMITH)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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LANCE LEONARD BARRY)	
Administrative Patent Judge)	

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RALPH E. JOCKE
231 SOUTH BROADWAY
MEDINA , OH 44256